REMARKS

STATUS OF CLAIMS

All of the pending claims 1-33 are rejected.

Reconsideration is requested.

ITEM 3: REJECTION OF CLAIMS 1-16, 18-24 AND 26-30 FOR OBVIOUSNESS UNDER 35 USC § 103(a) OVER KANEVESKY (OF RECORD) AND STRAIT (NEWLY CITED)

This obviousness (§ 103) rejection repeats much of the anticipation (§ 102(e)) rejection on Kanevesky in items 8 and 9 at pages 3-4 of the preceding, FINAL Office Action mailed February 19, 2003. The intervening response to that FINAL Office Acton comprising a Preliminary Amendment, filed with an RCE on July 21/23, 2003, and a Supplemental Preliminary Amendment, filed September 2, 2003 in accordance with agreements reached with the Examiner at an interview on August 12, 2003, are incorporated hereby by reference.

THE EXAMINER'S SEGREGATION OF THE CLAIMS OF ITEM 3 INTO VARIOUS GROUPS AT PAGES 2-4 OF THE ACTION

The Examiner groups claims 1, 9, 14, and 18 on pages 2-4 of the Office Action (Group A), and groups claims 5, 6, 13-16, 19-24 and 26-30 on page 4 of the Office Action (Group B)--which groupings are inappropriate and suggest that the Examiner does not correctly understand the differences between the respective independent claims of Groups A and B. Similar observations apply to the Examiner's further grouping of claims into Group C, as discussed hereinafter.

By way of example, appropriate groupings of related claims are submitted to be as follows:

Claims 1, 19, 27, 29

Claims 1, 19, 27 and 29 first convert the biometric information and then extract the feature information from the converted biometric information. The Examiner, however, includes claim 1 in Group A and claims 19, 27, and 29 in Group B.

Claims 9, 22, 28 and 30

Claims 9, 22, 28 and 30 first extract the feature information from the biometric information and then convert the extracted feature information. The Examiner, however, includes claim 9 in Group A and claims 22, 28 and 30 in Group B.

Claims 18 and 26

Claims 18 and 26 register converted biometric information and authenticate a specific individual by verifying the converted biometric information which is currently obtained with the registered biometric information. The Examiner, however, includes claim 18 in Group A and claim 26 in Group B.

The confused groupings of claims set forth in the Action render the contentions of the unpatentability of the pending claims inconsistent with the recitations of the claims themselves and render the grounds of rejection defective, as well.

THE FAULTY RELIANCE ON THE COMBINATION OF KANEVESKY AND STRAIT

With regard to independent claims 1, 19, 27 and 29 of the above Group A, the Examiner concedes (at page 3 of the Action, lines 9-10) that Kanevesky fails to teach verifying the extracted feature converted biometric information by comparing it against the extracted feature converted biometric information previously obtained. Particularly, whereas the final Action asserted that the "verifying the extracted feature" limitation is met by Kanevsky, at col. 6, line 5, the present Action at page 3, lines 7-10 now concedes that:

> Kanevsky, however, does not explicitly teach verifying the extracted feature converted biometric information by comparing it against the extracted feature converted biometric information previously obtained

(Action at page 3 on 7-10; emphasis added)

Accordingly, the Examiner relies on Strait as teaching these features now conceded not to be taught in Kanevsky (see Action at page 3, lines 10-17). However, and contrary to the Examiner's assertions, Strait does not teach verifying the extracted feature converted biometric

information previously obtained.

More specifically, the Action asserts, as to Strait:

> Referring to the instant claims, Strait discloses a system for normalizing biometric variations to authenticate users from a public database (see abstract). Strait teaches recording (i.e., extracting) the original biometric information and convolving (i.e., converting) the biometric measurements (i.e., extracted feature)-see col. 53, lines 50-55.

(Action at page 3, lines 10-17; inserts added by Examiner and emphases added)

The Examiner's citation of Col. 53, lines 50-55 of Strait comprises two paragraphs of claim 4 of Strait USP '315, which recite:

> recording original biometric measurements from a set of users; and
>
> convolving each of the original biometric measurements with a different original error correcting codeword...to generate a set of reference values....

The Examiner's assertion as to the disclosure of Strait, *supra*, improperly introduces into the above excerpt of the Strait claim 4 recitations, the words "extracting" and "converting"--of applicants' claims--as purportedly being the equivalent of the Strait claim terms of "recording" and "convolving." This is respectfully submitted to be both highly inappropriate and inaccurate. Based on an electronic scan of the text of the Strait patent, neither the words "recording" and "convolving" of Strait claim 4 nor the Examiner's substituted words --extracting-- and --converting-- are found in the Strait specification.

Moreover, "recording" and "extracting" have substantially diametrically opposed, or opposite, meanings (see definitions of Exhibits A and B, respectively) and, as well, "convolving" and "converting" are essentially unrelated to each other (see definitions of Exhibits C and D, respectively).

The Action further asserts:

> Strait teaches verifying the converted biometric information by comparing the error correcting codewords produced from the convolved biometric measurements (i.e., converted extracted feature biometric information)-see column 2, lines 30-50 and Fig. 2, blocks from 54 to 92.

(Action at page 3)

The Examiner, again, treats the claim terminology of applicants' claims, i.e., "converted extracted feature biometric information" as synonymous with the phrase from Strait, of "error correcting codewords produced from the convolved biometric measurements..."--which, applicants submit, is unsupported and in error.

Strait merely proposes "a system for normalizing biometric variations to authenticate users from a public database (see, Strait USP '315 Abstract)", and does not teach "recording (i.e., extracting) the original biometric information and convolving (i.e., converting) the biometric measurements (i.e., extracted feature)." In addition, Strait does not teach "verifying the converted biometric information by comparing the error correcting codewords produced from the convolved biometric measurements (i.e., converted extracted feature biometric information)."

As noted above, "recording" and "convolving" are different from "extracting" and "converting", respectively. Hence, "comparing the error correcting codewords produced from convolved biometric measurement" is different from "comparing the extracted feature converted biometric information."

It is respectfully submitted to be apparent that the Examiner's distortion of the teaching of Strait in an effort to justify a combination with Kanevsky for overcoming the belated admitted deficiencies of Kanevsky illuminates the deficiency of that combination.

STRAIT ADDRESSES A DIFFERENT PROBLEM IN THE PRIOR ART THAN THAT TO WHICH THE PRESENT INVENTION RELATES

The Examiner intentionally distorts the teachings of Strait in an effort to develop grounds of rejection of the applicants' claims herein. In fact, it is believed rather clear that Strait is addressing not the deficiencies of the prior art solved by the present invention but rather a different problem in the prior art, relating to a need for error correction procedures:

> A type of error correction procedure is needed to repeatedly reproduce the right bit pattern because sequential biometric measurements will have a range for any one individual, especially when taken at different times and places using even slightly different equipment.
>
> An error correction mechanism must therefore be incorporated in some part of a system for biometric data to be used for remote secure proof of identity. However, the number of bits that can be

> corrected by practical error detecting and correcting codes is inherently limited. And getting reproducible bits from individual biometric measurements is a fundamental problem.

(Strait at col. 2, lines 1-14)

To address the foregoing problems, Strait merely proposes an authentication system which produces a reference value from an exclusive-OR of a biometric measurement of an individual and a random codeword. Strait verifies the individual by obtaining a biometric measurement of the individual and reproducing the original random codeword from an exclusive-OR of the biometric measurement and the reference value.

As explained in the Summary of Invention in col. 2 of Strait, the basic algorithm, or procedure, for compensating for the variable "range" of biometric measurements obtainable for any given individual, when those measures are taken at different times and places:

> ...[T]he present invention comprises establishing a set of codewords spaced apart from one other by a Hamming distance (HD) that exceeds the variability that can be projected for a series of biometric measurements for a particular individual and that is less than the HD that can be encountered between to individuals. To enroll an individual, a biometric measurement is taken and exclusive-ORed with a random codeword to produce a "reference value." To verify the individual later, a biometric measurement is taken and exclusive-ORed with the reference value to reproduce the original random codeword or its approximation.

(Col. 2, lines 30-42)

Hence, Strait does not even suggest extracting feature information from the converted biometric information so as to obtain the extracted feature converted biometric information. Moreover, Strait does not even suggest verifying the extracted feature converted biometric information, currently obtained for a specific individual, with respect to extracted feature converted biometric information of individuals which was previously obtained and registered in advance, so as to authenticate the specific individual.

With regard to independent claims 9, 22, 28, and 30, Kanevsky fails to teach verifying the converted and extracted feature biometric information by comparing it against the converted and extracted feature biometric information previously obtained. Further, these features are also not taught or suggested in Strait.

With regard to independent claims 18 and 26, Kanevsky and Strait fail to teach or

suggest registering converted biometric information and authenticating the specific individual by comparing the converted biometric information which is currently obtained with the registered converted biometric information.

Conclusion

For the foregoing reasons, it is submitted that claims 1-16, 18-24 and 26-30 are allowable over Kanevsky and Strait.

ITEM 7: REJECTION OF CLAIMS 17, 25, 31-33 UNDER 35 USC 102(e) AS ANTICIPATED BY PRIDDY IN VIEW OF STRAIT

Item 7 erroneously cites an anticipation (§ 102(e)) grounds of rejection while, instead, asserting the combination of the two references--necessarily constituting a ground of rejection under § 103. Correction of the record is requested.

In much the same fashion as in the rejection based on Kanevsky and Strait, *supra*, item 7 of the Action concedes that Priddy has a deficiency:

> Priddy, however, does not explicitly teach verifying the extracted feature converted biometric information by comparing it against the extracted feature converted biometric information previously obtained.

(Action at page 5, lines 1-3)

In this rejection, Strait again is cited as disclosing a system "for normalizing biometric variations to authenticate users from a public database...." (Action at page 5) The Action then repeats the same purported reading of claim recitations on Strait, including the Examiner's improper and inaccurate assertions of the equivalence of "recording" and --extracting-- and of "convolving" and --converting-- and the Examiner's unwarranted reliance on those altered terms in describing the verification function of Strait.

Applicants incorporate by reference the foregoing traverses of the rejections of the preceding Item 3 of the Action in traverse of these repeated, erroneous assertions of item 7.

THE EXAMINER IMPROPERLY GROUPS CLAIMS 17, 25 AND 31-33 (GROUP C) AT PAGES 4-5 OF THE ACTION

The Examiner's grouping of independent claims 17, 25 and 31-33 is inappropriate and, again, it appears that the Examiner does not correctly understand the respective differences of these independent claims.

Claims 17 and 25 first measure the biometric information and then convert the measured biometric information, for verification, by a predetermined conversion process which is selected from the group recited in these claims

Claim 31 registers converted biometric information and authenticates the specific individual by comparing the converted biometric information which is currently obtained with the registered converted biometric information. Claim 31 does not require a predetermined conversion process to be selected from the group, such as that recited in claims 17 and 25. In fact, claim 31 relates to claims 18 and 26, discussed above.

With regard to independent claims 17 and 25, although the Examiner notes that Priddy fails to teach verifying the extracted feature converted biometric information by comparing it against the extracted feature converted biometric information previously obtained, claims 17 and 25 do not recite any such extracted feature.

Although the Examiner relies on Strait as teaching the features not taught in Priddy, the Examiner's comments do not apply to claims 17 and 25, since neither of claims 17 and 25 recites an extracted feature.

Instead, claims 17 and 25 recite verifying the converted biometric information by comparing it against the converted biometric information previously obtained where the predetermined conversion process that is carried out is selected from a group consisting of expansion, compression, rotation, deformation, affine transformation, morphing, coordinate transformation, function process, parameter conversion, frequency conversion, time base conversion and rearrangement of bit sequences.

Priddy and Strait do not teach or suggest verifying the converted biometric information by comparing it against the converted biometric information previously obtained, and do not teach or suggest carrying out a predetermined conversion process which is selected from a group consisting of expansion, compression, rotation, deformation, affine transformation, morphing, coordinate transformation, function process, parameter conversion, frequency conversion, time base conversion and rearrangement of bit sequences.

With regard to independent claim 31, Priddy and Strait fail to teach or suggest registering converted biometric information and authenticating the specific individual by comparing the converted biometric information which is currently obtained with the registered converted biometric information. In addition, as discussed above with respect to claims 18 and 26, Kanevsky also fails to teach or suggest these features of claim 31. Claims 32/31 and 33/31 inherit the patentably distinguishing limitations of claim 33 and are allowable for that reason alone, as well as for the respective distinguishing recitations thereof.

Conclusion

The grounds of rejection of claims 17, 25, and 31 are respectfully submitted to be deficient on numerous grounds, as set forth in the foregoing. Furthermore, it is submitted to be clear that claims 17, 25, and 31-33 are allowable over Priddy and Strait, even when taken in view of Kanevsky.

CONCLUSION

It is respectfully submitted that the contentions in support of the combinations of references are altogether inadequate and *prima facie* obviousness of the combinations has not been demonstrated. See Kunin memorandum of February 21, 2002, copy attached.

It is respectfully submitted that the pending claims patentably distinguish over the references of record, taken in any proper combination and, there being no other objections or rejections, that the application is in condition for allowance, which action is earnestly solicited.

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

STAAS & HALSEY LLP

Date: February 2, 2004

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CERTIFICATE UNDER 37 CFR 1.8(a)
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By: _____
Date: 2-2-04

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Date: February 21, 2002

To: Patent Examining Corps
Technology Center Directors

From: Stephen G. Kunin
Deputy Commissioner for Patent Examination Policy

Subject: Procedures for Relying on Facts Which are Not of Record as Common Knowledge or for Taking Official Notice

This memorandum clarifies the circumstances in which it is appropriate to take official notice of facts not in the record or to rely on "common knowledge" in making a rejection.

Recent court decisions have affected the Office's practice of taking official notice of facts by relying on common knowledge in the art without a reference. Specifically, the Supreme Court recently changed the standard of review applied to decisions of the Board of Patent Appeals and Interferences and the Trademark Trial and Appeal Board on appeal to the U.S. Court of Appeals for the Federal Circuit. *Dickinson v. Zurko*, 527 U.S. 150, 50 USPQ2d 1930 (1999). As a result, the Federal Circuit now reviews findings of fact under the "substantial evidence" standard under the Administrative Procedure Act (APA), rather than the former "clearly erroneous" standard. *In re Gartside*, 203 F.3d 1305, 1315, 53 USPQ2d 1769, 1775 (Fed. Cir. 2000).[1] This change in the review standard has affected the Federal Circuit's view of when the court or the USPTO may take notice of facts without specific documentary evidence support.[2]

On remand from the Supreme Court, the Federal Circuit in *In re Zurko*, 258 F.3d 1379, 59 USPQ2d 1693 (Fed. Cir. 2001), reversed the Board's decision upholding a rejection under 35 U.S.C. 103 for lack of substantial evidence. Specifically, in *Zurko* and other recent decisions, the court criticized the USPTO's reliance on "basic knowledge" or "common sense" to support an obviousness rejection, where there was no evidentiary support in the record for such a finding.[3] In light of the recent Federal Circuit decisions and the substantial evidence standard of review now applied to USPTO Board decisions, the following guidance is provided in order to assist the examiners in determining when it is appropriate to take official notice of facts without

supporting documentary evidence or to rely on common knowledge in the art in making a rejection, and if such official notice is taken, what evidence is necessary to support the examiner's conclusion of common knowledge in the art.

(1) Determine when it is appropriate to take official notice without documentary evidence to support the examiner's conclusion.

Official notice without documentary evidence to support an examiner's conclusion is permissible only in some circumstances. While "official notice" may be relied on, as noted in MPEP § 2144.03, these circumstances should be rare when an application is under final rejection or action under 37 CFR 1.113. Official notice unsupported by documentary evidence should only be taken by the examiner where the facts asserted to be well-known, or to be common knowledge in the art are capable of instant and unquestionable demonstration as being well-known.[4] In appropriate circumstances, it might not be unreasonable to take official notice of the fact that it is desirable to make something faster, cheaper, better, or stronger without the specific support of documentary evidence. Furthermore, it might not be unreasonable for the examiner in a first Office action to take official notice of facts by asserting that certain limitations in a dependent claim are old and well known expedients in the art without the support of documentary evidence provided the facts so noticed are of notorious character and serve only to "fill in the gaps" which might exist in the evidentiary showing made by the examiner to support a particular ground of rejection.[5]

It would not be appropriate for the examiner to take official notice of facts without citing a prior art reference where the facts asserted to be well known are not capable of instant and unquestionable demonstration as being well-known. For example, assertions of technical facts in the areas of esoteric technology or specific knowledge of the prior art must always be supported by citation to some reference work recognized as standard in the pertinent art.[6]

It is never appropriate to rely solely on "common knowledge" in the art without evidentiary support in the record, as the principal evidence upon which a rejection was based.[7] As the court held in *Zurko*, an assessment of basic knowledge and common sense that is not based on any evidence in the record lacks substantial evidence support.[8]

(2) If official notice is taken of a fact, unsupported by documentary evidence, the technical line of reasoning underlying a decision to take such notice must be clear and unmistakable.

Ordinarily, there must be some form of evidence in the record to support an assertion of common knowledge.[9] In certain older cases, official notice has been taken of a fact that is asserted to be "common knowledge" without specific reliance on documentary evidence where the fact noticed was readily verifiable, such as when other references of record supported the noticed fact, or where there

was nothing of record to contradict it.[10] If such notice is taken, the basis for such reasoning must be set forth explicitly. The examiner must provide specific factual findings predicated on sound technical and scientific reasoning to support his or her conclusion of common knowledge.[11] The applicant should be presented with the explicit basis on which the examiner regards the matter as subject to official notice and be allowed to challenge the assertion in the next reply after the Office action in which the common knowledge statement was made.

(3) If applicant challenges a factual assertion as not properly officially noticed or not properly based upon common knowledge, the examiner must support the finding with adequate evidence.

To adequately traverse such a finding, an applicant must specifically point out the supposed errors in the examiner's action, which would include stating why the noticed fact is not considered to be common knowledge or well-known in the art.[12] A general allegation that the claims define a patentable invention without any reference to the examiner's assertion of official notice would be inadequate. If applicant adequately traverses the examiner's assertion of official notice, the examiner must provide documentary evidence in the next Office action if the rejection is to be maintained.[13] If the examiner is relying on personal knowledge to support the finding of what is known in the art, the examiner must provide an affidavit or declaration setting forth specific factual statements and explanation to support the finding. See 37 CFR 1.104(d)(2).

If applicant does not traverse the examiner's assertion of official notice or applicant's traverse is not adequate, the examiner should clearly indicate in the next Office action that the common knowledge or well-known in the art statement is taken to be admitted prior art because applicant either failed to traverse the examiner's assertion of official notice or that the traverse was inadequate. If the traverse was inadequate, the examiner should include an explanation as to why it was inadequate.

(4) Determine whether the next Office action should be made final.

If the examiner adds a reference in the next Office action after applicant's rebuttal, and the newly cited reference is added only as directly corresponding evidence to support the prior common knowledge finding, and it does not result in a new issue or constitute a new ground of rejection, the Office action may be made final. If no amendments are made to the claims, the examiner must not rely on any other teachings in the reference if the rejection is made final. If the newly cited reference is added for reasons other than to support the prior common knowledge statement and a new ground of rejection is introduced by the examiner that is not necessitated by applicant's amendment of the claims, the rejection may not be made final. See MPEP § 706.07(a).

(5) Summary.

Any rejection based on assertions that a fact is well-known or is common knowledge in the art without documentary evidence to support the examiner's conclusion should be judiciously applied. Furthermore, as noted by the court in *Ahlert*, any facts so noticed should be of notorious character and serve only to "fill in the gaps" in an insubstantial manner which might exist in the evidentiary showing made by the examiner to support a particular ground for rejection. It is never appropriate to rely solely on common knowledge in the art without evidentiary support in the record as the principal evidence upon which a rejection was based.[14]

MPEP § 2144.03 will be revised accordingly in the upcoming revision to be consistent with this memo.

Cc: Nicholas Godici
Esther Kepplinger
Kay Kim
David Lacey

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[1] The Supreme Court has described substantial evidence review in the following manner:

> Substantial evidence is more than a mere scintilla. It means such relevant evidence as a reasonable mind might accept as adequate to support a conclusion...Mere uncorroborated hearsay or rumor does not constitute substantial evidence.

Consolidated Edison Co. v. NLRB, 305 U.S. 197, 229-30 (1938)(quoted in *Gartside*, 203 F.3d at 1312, 53 USPQ2d at 1773). "'Substantial evidence' review involves examination of the record as a whole, taking into account evidence that both justifies and detracts from an agency's decision." *Gartside*, 203 F.3d at 1312, 53 USPQ2d at 1773 (citing *Universal Camera Corp. v. NLRB*, 340 U.S. 474, 487-88 (1951)). Furthermore, the Supreme Court has also recognized that "the possibility of drawing two inconsistent conclusions from the evidence does not prevent an administrative agency's finding from being supported by substantial evidence." *Consolo v. Federal Maritime Comm'n*, 383 U.S. 607, 620 (1966) (quoted in *Gartside*, 203 F.3d at 1312, 53 USPQ2d at 1773).

[2] See *Packard Press, Inc. v. Hewlett-Packard Co.*, 227 F.3d 1352, 1360, 56 USPQ2d 1351, 1356 (Fed. Cir. 2000) (questioning authority to take judicial notice for the first time on appeal in light of the APA standard of review established by *Dickinson v. Zurko*, 527 U.S. at165, 50 USPQ2d at 1937). Although the substantial evidence standard is deferential to the agency's decision, it imposes certain evidentiary requirements that must be met by the agency in formulating a decision. The Federal Circuit explained that "[i]n appeals from the Board, we have before us a comprehensive record that contains the arguments and evidence presented by the parties, including all of the relevant information upon which the board relied in rendering its decision." *Gartside*, 203 F.3d at 1314, 53 USPQ2d at 1774. Furthermore, the record is "closed, in that the Board's decision must be justified within the four corners of that record." *Id.* Thus, the record before the USPTO "dictates the parameters of review" available to the court. *Id.* Accordingly, "the Board's opinion must explicate its factual conclusions, enabling [the court] to verify readily whether those conclusions are indeed supported by 'substantial evidence' contained within the record." *Id.* (citing *Gechter v. Davidson*, 116 F.3d 1454, 1460, 43 USPQ2d 1030, 1035 (Fed. Cir. 1997)).

[3] *Zurko*, 258 F.3d at 1385, 59 USPQ2d 1697 ("the Board cannot simply reach conclusion based on its own understanding or experience—or on its assessment of what would be basic knowledge or common sense. Rather, the Board must point to some concrete evidence in the record in support of these findings."). See also *In re Lee*, __F.3d__, __, 61 USPQ2d 1430, 1434 (Fed. Cir. 2002) (The Board determined that it was not necessary to present a source of a teaching, suggestion, or motivation to combine the references

because the conclusion of obviousness may be made from common knowledge and common sense of a person of ordinary skill in the art. The court reversed the Board's decision in sustaining a rejection under 35 U.S.C. 103 and stated that "'common knowledge and common sense' on which the Board relied in rejecting Lee's application are not the specialized knowledge and expertise contemplated by the Administrative Procedure Act. Conclusory statements such as those here provided do not fulfill the agency's obligation...The board cannot rely on conclusory statements when dealing with particular combinations of prior art and specific claims, but must set forth the rationale on which it relies").

[4] As noted by the court in *In re Ahlert*, 424 F.2d 1088, 1091, 165 USPQ 418, 420 (CCPA 1970), the notice of facts beyond the record which may be taken by the examiner must be "capable of such instant and unquestionable demonstration as to defy dispute" (citing *In re Knapp Monarch Co.*, 296 F.2d 230, 132 USPQ 6 (CCPA 1961)). In *Ahlert*, the court held that the Board properly took judicial notice that "it is old to adjust intensity of a flame in accordance with the heat requirement." See also *In re Fox*, 471, F.2d 1405, 1407, 176 USPQ 340, 341 (CCPA 1973) (the court took "judicial notice of the fact that tape recorders commonly erase tape automatically when new 'audio information' is recorded on a tape which already has a recording on it").

[5] *Zurko*, 258 F.3d at 1385, 59 USPQ2d at 1697; *In re Ahlert*, 424 F.2d at 1092, 165 USPQ at 421.

[6] *In re Ahlert*, 424 F.2d at 1091, 165 USPQ at 420-21. See also *In re Grose*, 592 F.2d 1161, 1167-68, 201 USPQ 57, 63 (CCPA 1979) ("[w]hen the PTO seeks to rely upon a chemical theory, in establishing a prima facie case of obviousness, it must provide evidentiary support for the existence and meaning of that theory."); *In re Eynde*, 480 F.2d 1364, 1370, 178 USPQ 470, 474 (CCPA 1973) ("we reject the notion that judicial or administrative notice may be taken of the state of the art. The facts constituting the state of the art are normally subject to the possibility of rational disagreement among reasonable men and are not amenable to the taking of such notice.").

[7] *Zurko*, 258 F.3d at 1385, 59 USPQ2d at 1697. While the court explained that, "as an administrative tribunal the Board clearly has expertise in the subject matter over which it exercises jurisdication," it make clear that such "expertise may provide sufficient support for conclusions [only] as to peripheral issue." *Id.* at 1385-86, 59 USPQ2d at 1697.

[8] *Zurko*, 258 F.3d at 1385, 59 USPQ2d at 1697. See also *In re Lee*, __F.3d at __, 61 USPQ2d at 1435.

[9] See *In re Lee*, __F.3d at __, 61 USPQ2d 1434-35; *In re Zurko*, 258 F.3d at 1386, 59 USPQ2d at 1697 (holding that general conclusions concerning what is "basic knowledge" or "common sense" to one of ordinary skill in the art without specific factual findings and some concrete evidence in the record to support these findings will not support an obviousness rejection).

[10] See *In re Soli*, 317 F.2d 941, 945-46, 137 USPQ 797, 800 (CCPA 1963) (the court accepted the examiner's assertion that the use of "a control is standard procedure throughout the entire field of bacteriology" because it was readily verifiable and disclosed in references of record not cited by the Office); *In re Chevenard*, 139 F.2d 711, 713, 60 USPQ 239, 241 (CCPA 1943) (accepting examiner's finding that a brief heating at a higher temperature was the equivalent of a longer heating at a lower temperature where there was nothing in the record to indicate the contrary and where the applicant never demanded that the examiner produce evidence to support his statement).

[11] See *Soli*, 317 F.2d at 946, 37 USPQ at 801; *Chevenard*, 139 F.2d at 713, 60 USPQ at 241.

[12] See 37 CFR 1.111(b). See also *Chevenard*, 139 F.2d at 713, 60 USPQ at 241 ("[I]n the absence of any demand by appellant for the examiner to produce authority for his statement, we will not consider this contention.").

[13] See 37 CFR 1.104(c)(2). See also *Zurko*, 258 F.3d at 1386, 59 USPQ2d at 1697 ("the Board [or examiner] must point to some concrete evidence in the record in support of these findings" to satisfy the substantial evidence test).

[14] See *Zurko*, 258 F.3d at 1386, 59 USPQ2d at 1697; *Ahlert*, 424 F.2d at 1092, 165 USPQ 421.

Print this entry

One entry found.

Main Entry: **con volve**
Pronunciation: kən'välv
Function: *verb*
Inflected Form(s): **-ed/-ing/-s**
Etymology: Latin *convolvere,* from *com-* + *volvere* to roll -- more at VOLUBLE
transitive verb
1 *obsolete* : **ENFOLD, ENWRAP, ENCLOSE**
2 : to roll together : roll or twist (one part) on another : **WRITHE** <*convolving* his chin and cheek in a rapid series of pursed lips and horrible squints -- Thomas Wolfe>
intransitive verb : to roll together or circulate involvedly <the sweeping brushstrokes *convolve* like thunderclouds -- R.C.Peace>

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16 entries found .
To select an entry, click on it.

record[1,verb]
recording
lateral recording
magnetic recording
noiseless recording
recording agent

Main Entry: [1]re cord
Pronunciation: rə'kȯ(ə)rd, rē'-, -ȯ(ə)d
Function: *verb*
Inflected Form(s): **-ed/-ing/-s**
Etymology: Middle English *recorden* to recall, recite, set down in writing, from Old French *recorder,* from Latin *recordari* to call to mind, remember, from *re-* + *cord-, cor* heart, mind -- more at HEART
transitive verb
1 a *obsolete* : RECALL, REMEMBER b *archaic* : SING, WARBLE <hear the lark *record* her hymns -- Edward Fairfax>
2 a (1) : to set down in writing : make a written account or note of : furnish written evidence of : put into written form <a people that carefully *recorded* their history> <*recorded* her impressions in a series of books> <*recorded* the sounds heard in phonetic symbols> (2) : to make or have made an authentic official copy of (as a deed, mortgage, lease) and deposit or have deposited especially as in an office designated by law (3) : to cause to be noted officially in or as if in writing <*recording* and tallying the votes> <*recorded* the proceedings of the court> b (1) : to make an objective lasting indication of in some mechanical or automatic way : register permanently by mechanical means <studied the intensity of the earthquake as it had been *recorded* by the seismograph> (2) *of an instrument* : to point out (data) at a particular time or under particular circumstances on or as if on a scale : show in this way <noticed that at that moment the thermometer *recorded* 90°> c : to give evidence of <the extent of the explosion is *recorded* on the charred tree trunks of the surrounding area>
3 a : to cause (sound, visual images) to be transferred to and registered on something (as a phonograph disc, magnetic tape) by mechanical usually electronic means in such a way that the thing so transferred and registered can (as by the use of a phonograph, tape recorder) be subsequently reproduced b : to register in this way a performance of (as an orchestra, singer, actor) or rendition or playing of (as a piece of music, an instrument)
intransitive verb
1 a : to record something <spent the whole day *recording*> b : to admit of being recorded <a voice that *records* beautifully>
2 *archaic* : SING, WARBLE

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extract[1,transitive verb]
extract[2,noun]
extract[3,adjective]
almond extract
aqueous extract
beef extract

Main Entry: ^{1}**ex tract**
Pronunciation: ik'strakt, ek's-, *in sense 3a usually and in other senses sometimes* 'ek,s-
Function: *transitive verb*
Inflected Form(s): **extracted; extracted** *or obs* **extract; extracting; extracts**
Etymology: Middle English *extracten,* from Latin *extractus,* past participle of *extrahere,* from *ex-* ^{1}ex- + *trahere* to draw, pull -- more at DRAW
1 a : to draw forth <*extracting* a letter from his pocket>; *especially* **:** to pull out (as something embedded or otherwise firmly fixed) forcibly or with great effort <*extracting* a tooth> <*extracting* the bullet from the wound> <*extracting* the stump of a tree> **b :** to obtain (as money or knowledge of a secret) by much maneuvering and effort from or as if from someone unwilling <before you try to *extract* money from anyone -- Edith Sitwell> <*extracting* a promise> <*extracting* information> <*extracting* the truth> **c :** to derive (as pleasure) or deduce (as the meaning of a word) from a specified source as if by drawing forth <*extracting* happiness from what many would consider a humdrum existence> <*extracting* a strange meaning from what she had said> **d :** to separate or otherwise obtain (as constituent elements or juices) from a substance by treating with a solvent (as alcohol), distilling, evaporating, subjecting to pressure or centrifugal force, or by some other chemical or mechanical process <*extracting* an essence> <*extracting* the juice of apples> <*extracted* honey> -- compare LEACH 1b **e :** to treat with a solvent so as to remove soluble substances <adrenal cortex is *extracted* with acetone> -- compare LEACH 1a **f :** to separate (an ore or mineral) from a deposit; *also* **:** to separate (a metal) from an ore **g :** to separate (flour) from broken grain kernels in the process of grinding grain **h :** to separate (a particular genetic character) in the form of a homozygote from a heterozygous strain <*extracted* albinos> <*extracted* dominants and recessives>
2 : to determine (the root of a number or quantity) by mathematical calculation <*extracting* the square root of 64>
3 a : to make out an extract (sense 1b) of **b :** to select (excerpts) and copy out or cite <I have *extracted* out of that pamphlet a few notorious falsehoods -- Jonathan Swift>
4 : to subject to any action or process of extracting
synonym see EDUCE

Print this entry

2 entries found.
To select an entry, click on it.

convert[1,verb]
convert[2,noun]

Main Entry: **[1]con vert**
Pronunciation: kən'vərt, -vāt, -vəit, *usu* -d.+V
Function: *verb*
Inflected Form(s): **-ed/-ing/-s**
Etymology: Middle English *converten,* from Old French *convertir,* from Medieval Latin *convertere,* from Latin, to turn around, employ, transform, from *com-* + *vertere* to turn -- more at WORTH
transitive verb
1 a (1) : to bring over or persuade (a person or group) to a particular belief, view, course, party, or principle often from a previously held position <he was *converted* to the Copernican theory by ... the professor of astronomy -- S.F.Mason> <*convert* young people to the pleasures of reading> <an ex-Tory who ... had gone to give a Socialist editor a good piece of her mind and come away *converted* -- N.F.Busch>; *specifically* : to bring over or persuade to the Christian faith <no attempt was made to *convert* the Moslems -- W.H.Prescott> (2) : to bring about a spiritual conversion in (as a religious conversion in a person or group) **b** (1) : to change or turn from one state to another : alter in form, substance, or quality : **TRANSFORM, TRANSMUTE** <sheepskins are *converted* into parchment> <ideas ... *converted* into deeds -- John Mason Brown> (2) : to turn (iron) into steel by the Bessemer process : turn (matte) into copper : make (Bessemer steel) from iron : make (copper) from matte (3) : to change the chemical nature of (as by changing starch into dextrose) (4) : to finish (gray goods) by dyeing, bleaching, or printing (5) : to score on (a try for point after touchdown in football or a free throw in basketball) (6) : to process (paper) as by gumming or waxing; *also* : to fabricate (paper) into finished products <*convert* paper into envelopes or paperboard into cartons> **c** (1) : to change or turn from one use, purpose, or function to another <*converting* some newly unpacked article ... into a missile against the head of some unfortunate servant -- T.L.Peacock> <every possible industry was *converted* to produce war goods -- Morris Sayre> (2) : to remodel in order to accommodate to a new manner of operation or change from one type to another <*convert* a coal furnace to oil> <a trawler *converted* into a minesweeper> (3) : to appropriate dishonestly or illegally <*converting* to its own ... use 80,000 bushels of corn stored for the Commodity Credit Corp. -- *Time*>
2 a *obsolete* : to cause to turn : **TURN, DIRECT** <which way shall I first *convert* myself -- Ben Jonson> **b** *obsolete* : to turn back : cause to return : turn in the opposite direction
3 [Middle English *converten,* from Old French *convertir,* from Late Latin *convertere* to convert, from Latin, to turn around, transform] **a** *obsolete* : to translate into another language <which story ... Catullus more elegantly *converted* -- Ben Jonson> **b** *logic* : to make a conversion of (a proposition) **c** : to exchange for a specified equivalent <*convert* stock holdings into cash> **d** : to create a situation that causes (property of one nature) to be deemed in equity changed into property of another nature -- compare CONVERSION 3 d **e** : to exchange (one security) for another under a conversion privilege or an offer made by the issuer **f** : to turn (one type of money) into another in the market or merely for purposes of calculation <*convert* francs into dollars> **g** : to exchange (an insurance policy) for one of a different type
intransitive verb
1 : to make or undergo a conversion : undergo physical, moral, or functional change <let grief

convert to anger -- Shakespeare> <factories were *converting* to war production> <a sofa that *converts* into a bed>

2 : to make a score on a try for point or a free throw

synonym see TRANSFORM